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What is claimed is:

1. A bulk acoustic wave multiplexer controlled by micro-electro-mechanical switches, it comprises:
 - 5 a substrate;
 - a wave-filtering device disposed on the substrate;
 - an input port disposed on one side of the wave-filtering device;
 - an output port disposed on another side of the wave-filtering device; and
 - micro-electro-mechanical switches disposed on the wave-filtering device for controlling the bulk acoustic wave multiplexer.
2. The bulk acoustic wave multiplexer as claimed in claim 1, wherein, the electro-mechanical switches can be driven by any actuating methods, such as: electrostatic driving, thermal-electrical driving, piezoelectrical driving, etc.
- 15 3. The bulk acoustic wave multiplexer as claimed in claim 1, wherein, while the micro-electro-mechanical switch is contacted with the upper electrode of the bulk acoustic multiplexer, the bulk acoustic wave multiplexer can be controlled to be switched off.
- 20 4. The bulk acoustic wave multiplexer as claimed in claim 1, wherein, while the micro-electro-mechanical switch is apart from the upper electrode of the bulk acoustic wave multiplexer, the bulk acoustic wave multiplexer can be controlled to be switched on.
5. A bulk acoustic wave multiplexer controlled by micro-electro-mechanical switches, it comprises:

- an antenna;
- an output/input port connected with the antenna;
- micro-electro-mechanical switches; and
- input ports that can be connected with outward.
- 5 6. The bulk acoustic wave multiplexer as claimed in claim 5, wherein the signals from the antenna can be controlled by the micro-electro-mechanical switches to enter the receiving input port.
- 10 7. The bulk acoustic wave multiplexer as claimed in claim 6, wherein the signals from the input ports can be controlled by the micro-electro-mechanical switches to enter the transmitting terminal, and then the signals are transmitted by the antenna.
- 15 8. A bulk acoustic wave multiplexer controlled by micro-electro-mechanical switches, it comprises:
- output/input ports;
- micro-electro-mechanical switches; and
- output ports.
- 20 9. The bulk acoustic wave multiplexer as claimed in claim 8, wherein the signals are inputted from the output/input ports, then, under the control of the micro-electro-mechanical switches, the signals are wave-filtered and outputted, thus, the function of wave-filtering multiplexing is achieved.
10. The bulk acoustic wave multiplexer as claimed in claim 9, wherein the wave-filtering devices controlled respectively by the micro-electro-mechanical switches can be various channels with same

frequency.

11. The bulk acoustic wave multiplexer as claimed in claim 9, wherein the
wave-filtering devices controlled respectively by the
micro-electro-mechanical switches can be various channels with various
frequencies.
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12. A bulk acoustic wave multiplexer controlled by micro-electro-mechanical
switches, it comprises:
an upper substrate;
micro-electro-mechanical switches and driving circuits formed on the
upper substrate;
10 a lower substrate;
wave-filtering units and connecting circuits formed on the lower substrate;
wherein, the upper and lower substrates are connected together to form a
bulk acoustic wave multiplexer controlled by micro-electro-mechanical
switches.
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13. The bulk acoustic wave multiplexer as claimed in claim 12, wherein the
upper and lower substrates are connected by flip-chip or CSP (chip scale
package).
14. The bulk acoustic wave multiplexer as claimed in claim 13, wherein the
driving circuits for driving the micro-electro-mechanical switches are
CMOS circuits.
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